

### **REMARKS/ARGUMENTS**

Aiken, US Patent No. 3,757,782, discloses a swab-type applicator for a treatment liquid comprising an elongated tubular member encapsulating a solution and provided at both ends with a rupturable sealing element in the form of a thin closure disc or membrane. Aiken discloses that manual squeezing pressure on the tube between the temporarily sealed ends will cause the liquid to rupture one or both of the sealing elements. Another embodiment disclosed by Aiken comprises of a small separating sealing plug permanently seated within the wall of the tube at its mid-point. The sealing plug thus defines two sub-chambers or compartments on opposite axial sides of plug 22. This embodiment permits selective squeezing and end-rupturing compression of the tube at sublengths at either side of said separator element, temporarily leaving intact the rupturable sealing element for the opposite tube sub-length.

The applicator disclosed by Aiken cannot reliably release the liquid within the elongated tubular member, particularly when the internal diameter of the elongated tubular member is small, e.g. less than 3mm. Upon manual squeezing of the flexible elongated tubular member, only one rupturable sealing element at one end of the elongated tubular member can be ruptured. It is virtually impossible for both rupturable sealing element to be ruptured by manual squeezing of the elongated tubular member since upon rupturing of one rupturable sealing element, the pressure within the elongated tubular member will be relieved and the remaining rupturable sealing element cannot be ruptured. With the other embodiment disclosed by Aiken, only one rupturable sealing element is presented to the liquid within each compartment.

With a small diameter elongated tubular member and with just one opening, it is virtually impossible to extract the liquid within it through the one opening since the capillary action of the

liquid and the atmospheric pressure will hold the liquid within the elongated tubular member. Even with manual squeezing of the elongated tubular member and with liquid completely filling the elongated tubular member, only a small portion of the liquid in the elongated tubular member near the opening will be forced out of the elongated tubular member. If the elongated tubular member is not completely filled by the liquid, it will be virtually impossible to extract any quantity of the liquid within the elongated tubular member.

This is a well known natural physical phenomenon and scientific fact. One may easily experiment with a simple straw by inserting the straw into a cup of water and then sealing the top end of the straw with one's finger. Upon withdraw of the straw from the cup of water, the water within the straw will remain within the straw until such time that one release the finger sealing the top end of the straw. This natural physical phenomenon is even more evident when the diameter of the straw is small. Even if one is to squeeze the straw, only the small quantity of the water near the open end will be extracted. When the diameter of the straw is small, only a negligible amount of the water, if any, may be extracted. If the water is positioned near the sealed end of the straw, even squeezing of the straw may not extract any of the water in the straw if the volume displaced by the squeezing is less than the volume of air between the water and the open end of the straw. The water will simply shift its position within the straw.

Furthermore, with either embodiment of the applicator disclosed by Aiken, it can only release one liquid to one applicator swab at one end of the elongated tubular member. With the first embodiment disclosed by Aiken, only one liquid is enclosed within the elongated tubular member. Therefore, only one liquid is available to be release to either end of the elongated tubular member. Even assuming it is possible to open both ends of the elongated tubular

member simultaneously, still only one liquid is available to be release to either end of the elongated tubular housing. With the other embodiment disclosed by Aiken, the sealing plug defines two sub-chambers or compartments on opposite axial sides of plug and only one opening and one applicator swab is available to each compartment. Therefore, even if the two chambers contain different liquids, it is impossible for both liquids to be extracted into the same applicator swab at one end of the elongated tubular member. Each of the liquids in each compartment will be released into their respective separate applicator swab at opposite ends of the elongated tubular member.

The multi-channel single-tube sealed container and applicator of applicant's invention will reliably and positively release the liquids within its housing **1** irrespective of the diameter of the housing **1**, even when the diameter of the housing is very small, e.g. 3mm. As shown in figures 9, 10, and 11 of the original specification and also disclosed on page 5 line 10 through page 6 line 6, both ends **5**, **6** of the housing **1** is opened to allow equalization of atmospheric pressure to positively release the liquids within the housing **1**. No manual squeezing of the housing **1** is necessary, therefore, the housing **1** may be made of a rigid, non-flexible material. Furthermore, applicant's invention uses a score line **7**, **8** on the housing **1** to positively break open both ends of the housing **1**. The score lines **7**, **8** do not depend on manual squeezing of the housing **1** to open the housing **1**. Therefore, both ends **5**, **6** can be opened reliably and positively each and every time.

Furthermore, as shown in all the figures in the original disclosure and also disclosed in the original specification on page 4 lines 5 through 6 and line 11, applicant's invention comprises of multiple channels **2**, **3** and **11**, **12** through the length of the housing **1**. As is clearly seen in the

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Reply to Office Action of: December 10, 2003

drawings, each of the multiple channels **2, 3** and **11, 12** extend from one end of the housing **1** to the other end of the housing **1** with both ends of each channels sealed at the same location at both end of the housing **1**. Therefore, when the housing **1** is broken open at the score lines **7, 8** near each end of the housing **1**, all the channels will be opened simultaneously. Upon opening of both ends **5, 6** of the housing **1**, all the liquids in all the channels will be extracted simultaneously to the same applicator tip at one end. The invention disclosed by the applicant will reliably and positively release multiple liquids into one applicator tip. The structures disclosed by Aiken cannot perform the same or similar function.

In addition, in one embodiment of applicant's disclosed invention, which is shown in figures 10 and 11 and claimed in claims 5 through 8, multiple score lines **11, 12** are formed at predetermined distances from each sealed end **5, 6** to allow control of the amount of the liquid released by breaking the sealed ends **5, 6** at the appropriate score lines **11, 12**. This is disclosed in the original specification on page 5 line 14 through page 6 line 6. This embodiment of applicant's invention is also not disclosed or suggested by Aiken. Furthermore, the structure of Aiken does not have any score lines nor are score lines operable with Aiken's flexible housing because the housing will simple bend and not break open at the score lines.

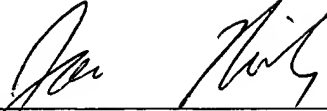
Applicant has amended the claims to further overcome the rejection. Accordingly, the rejections under 35 U.S.C. §112 are deemed overcome by applicant's amendments and remarks. Applicant hereby respectfully requests withdrawal of the rejection and a timely Notice of Allowance issued in this case.

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Respectfully submitted,



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